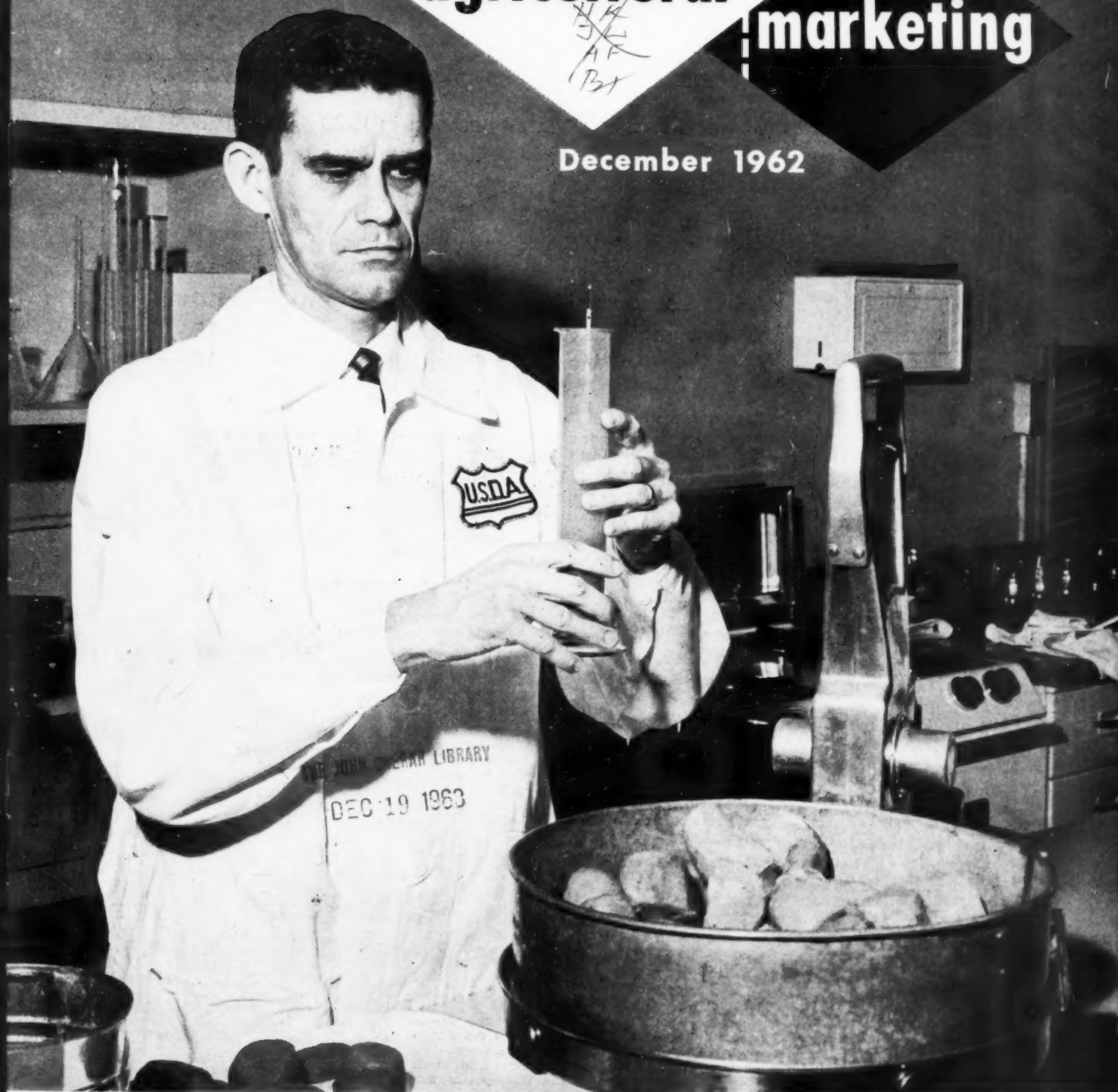


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U.S. DEPARTMENT OF AGRICULTURE • AGRICULTURAL MARKETING SERVICE

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**December 1962**

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**Cover Page**

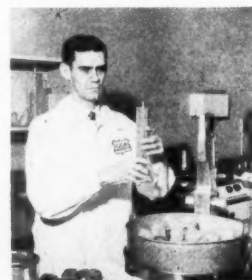
Canned sweetpotatoes are being inspected by Charles W. Luxford, marketing specialist in the Processed Products Inspection and Standardization Branch, Fruit and Vegetable Division, AMS.

The elongated glass jar in his hand is a cylinder containing the syrup he has drained from a can of sweetpotatoes. At the moment, he is determining the percentage of sugar in the syrup. The pan of potatoes on the scales is being weighed dry, for drain weight. The potatoes are also inspected for defects, size, color, stringiness, and edibility.

This processed fruit and vegetable inspection is a service offered by the U.S. Department of Agriculture, on a voluntary pay-for-service basis. It is impartial and official, covering not only canned, frozen, dried, and dehydrated foods, but jams, jellies, peanut butter and coffee as well. USDA's inspectors will inspect your product and issue a certificate stating its quality. The certification may be based on the official USDA Grade Standards available for most of these products, or on specifications written by the buyer or seller. AMS offers similar services for most all foods.

*Editor, MILTON HOFFMAN*

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# Cherry Crop Five Times As Large As in 1920

**T**HE U.S. commercial cherry crop is more than five times as large today as it was in 1920 with a larger proportion of tart cherries, according to the U.S. Department of Agriculture's Statistical Reporting Service. Most of the increase took place between 1920 and 1940. During the last four years, production of sweet cherries averaged around 90,428 tons and that of tart cherries about 150,102 tons, 62 percent of the total. Cherry production, especially tart, varies quite a bit from year to year.

California, Oregon, and Washington are by far the leading sweet-cherry producing States. Out in front on tart cherries is Michigan with well over half the crop in the last three years. New York comes up second, then Wisconsin,

Pennsylvania, and Ohio—92 percent of all tart cherries came from these five States in 1958-61.

Around 95 percent of all tart cherries were canned or frozen last year—compared with 74 percent 20 years earlier. Most tart cherries are made into pies—the rest go into other bakery goods, juice, jam, and jelly.

About a third of our sweet cherries are sold fresh, the rest of this crop is canned, preserved in brine for making maraschino and candied cherries, or frozen. Two decades ago, about half were marketed this way. Some processed sweet cherry products are juice, wine, preserves, and maraschino and candied cherries.

Americans still eat about the same amount of cherries per person as in the

'30s although there's been some shifting among types. We now eat more processed cherries and more of them are frozen or brined for other uses. Consumption of all varieties, fresh and processed on a fresh basis, averaged at about 2.3 pounds for the last four years.

This was a little more than one percent of all fruit used per capita. The 2.3-pound total split up into 20 percent fresh cherries, 31 percent canned, 29 percent frozen, and 20 percent brined.

Production prospects look bright for the next few years, too—production is expected to increase some more. The upswing will be mostly in tart cherries, however. More will be processed too—likely more brined sweet cherries and frozen tart cherries.

*Around 95 percent of all tart cherries were canned or frozen last year—compared with 74 percent 20 years earlier. Most of them are made into pies, like this one. The rest go into other bakery goods, juice, jam and jelly.*





USDA's "Pure Food—USA" exhibit at the Fifth International Food Congress and Exposition in New York. Secretary of Agriculture Orville L. Freeman (right) called the exhibit "a symbol of the power of free men."

## High Quality and Purity of U. S. Food Stressed to Foreign Food Men at Fair

**T**HE high quality and purity of U.S. foods were exhibited to foreign food executives from 30 nations at the recent Fifth International Food Congress and Exposition in New York.

Prepared by the U.S. Department of Agriculture, the exhibit was a departure from the USDA's usual approach at trade fairs around the world. Instead of introducing food items with an eye toward expanding markets, the USDA, at this exhibit themed "Pure Food—USA", explained the role of Federal agencies in assuring the purity and quality of American foods for domestic and foreign consumption.

In an address opening the Exposition, Secretary of Agriculture Orville L. Freeman said the "magnificent display of rich and varied foods . . . presents a startling array of products representing innovations in processing, the convenience of packaging, the marvels of modern technology which transform raw products of the farm into wholesome, tempting foods of every conceivable description."

Calling the exhibition "a symbol of the power of free men to assure the power of free nations," he said it represented not only modern science and technology, but also "the initiative and self-reliance of free farmers and the ingenuity and imagination of manufacturers competing in the stimulating climate of the free world."

Soon to be shown abroad, the display is sponsored by the Foreign Agricultural Service, Agricultural Marketing Service and the Agricultural Research Service of the U.S. Department of Agriculture, and by the Food and Drug Administration of the U.S. Department of Health, Education and Welfare.

Exhibit Director Print Hudson of the Foreign Agricultural Service pointed out that homemakers abroad show the same concern as their American counterparts for the safety, quality, and nutritional value of foods they buy.

For this reason, he noted, foreign food merchants and manufacturers showed deep interest in the technical

advances and guarantees made by Government agencies in assuring that American products are as they are purported to be—pure, safe and good, and thus exportable with confidence.

Several special promotional events for the trade were held in connection with the exhibit. For instance, 60 West German food executives, representing EDEKA, a chain of 41,000 cooperative stores, made a special tour of "Pure Food—USA" by invitation. EDEKA has a 30 percent share of the retail food sales in West Germany, and is considered one of the largest single market outlets for American food products in Europe. West Germany normally ranks among the leading nations in imports of U.S. agricultural commodities.

Since West Germany is the leading buyer of poultry products, EDEKA representatives showed interest in the Department of Agriculture's mandatory inspection for wholesomeness required for poultry moving in interstate and foreign commerce.

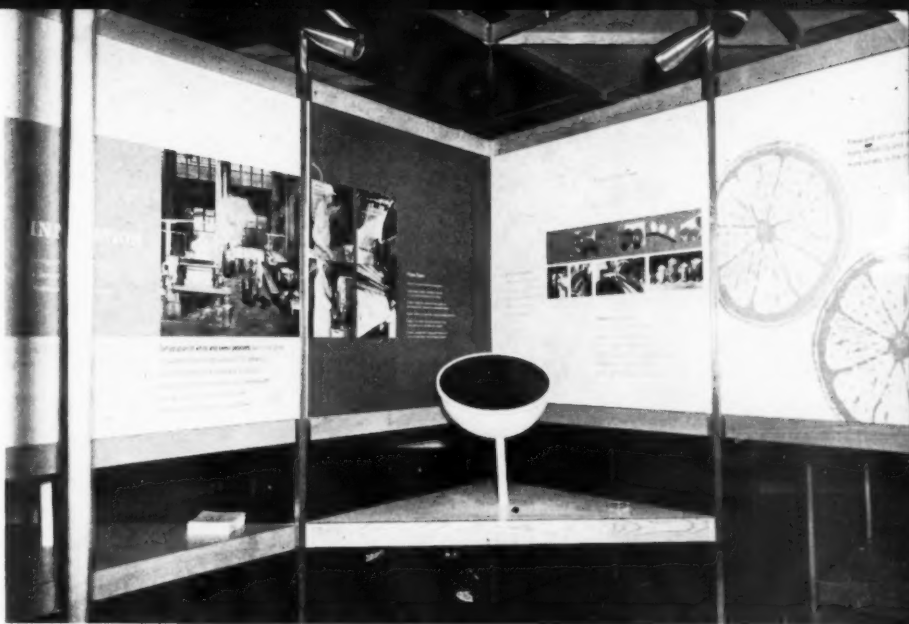
A mechanical "thumb," designed by



the Agricultural Marketing Service to determine maturity of certain fruit without bruising or damaging, drew comment from United Kingdom visitors. A merchant felt that it appeared to usurp the shopper's inalienable right to do her own "squeezing" to determine that "just right" feel. Actually, the "thumb", a new research development, is intended for use primarily by the Department's personnel in inspection and grading operations.

The development of new products to expand domestic and foreign markets, as shown in the exhibit, also evoked interest. Canadian visitors noted that potato flakes, developed by the USDA's Agricultural Research Service, are now being processed and marketed in major cities.

Of major concern to foreign food manufacturers was the use of chemicals in agricultural and food processing. Questions dealing with additives, tolerances, and prescribed application of chemicals and pesticides were frequently asked of Food and Drug specialists at the exhibit.



## *Signposts for low-cost*

# Handling of Fruits and Vegetables

By ROBERT K. BOGARDUS

**C**ONTINUOUS as the cycle of night and day is the task of reducing the cost of handling fresh fruits and vegetables to the lowest possible level. And, whatever that cost level is, it must be consistent with the requirements of good customer service and the need for maintaining product quality.

For management, the best position it can take on handling costs is to be continually dissatisfied with them—not in an arbitrary manner, of course, but realistically. For wholesale distributors could save thousands of dollars every year through more aggressive management, and more effective control of their handling operations.

This feat can well be achieved without spending a penny on new materials handling equipment. Every piece of existing equipment—no matter how primitive it is—has a productive capa-

city which all too frequently is not utilized. As a result, both equipment and labor costs mount higher than they need to be.

Frequent symptoms of higher-than-necessary costs are excessive overtime, idle equipment, and more workers than those needed to perform whatever work is available. For, if these symptoms are generally true—and they certainly appear to be—how can the wholesale distributor of fruits and vegetables change over from a defensive to an offensive position in order to reduce his operating costs?

Obviously, low cost handling is not achieved on a one-shot basis. Personnel changes, different business and service requirements, new packages, increased labor rates, fringe benefits and new methods and equipment—plus just plain human nature—all make a con-

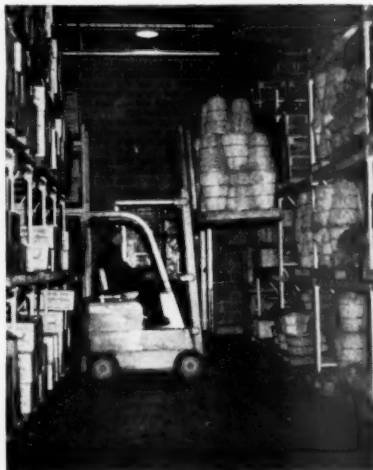
tinuing study of handling vitally necessary.

Costs, of course, can be cut by looking for signposts of low cost handling, which means that handling operations and warehouse arrangements must be checked regularly to keep costs down.

Here are some of the signposts:

**Unit Loads:** By definition, a unit is composed of several packages grouped together so they may be handled as a unit for unloading, transporting, stacking, or truck-loading operations. Or, for that matter, *any* combination of these operations, rather than as individual packages. A unit can be any load which consists of two or more packages so set together that they can be handled and moved simultaneously, or as a unit.

Loaded pallets, for instance, would be unit loads. The greater the number



*Labor time is reduced by unit loading—grouping several packages together so they may be handled as a unit for unloading—like this. The more packages per load, the fewer trips required.*

of packages per unit load, the fewer trips required between transportation points. Logically, labor time is reduced when unit loads are used, not only because of fewer trips, but because packages are manhandled much less frequently.

#### *Equipment Care and Maintenance:*

The more productive capacity that a unit of materials handling equipment has, the more complex it usually is. Its first cost is higher, and it requires greater care in its operation. Maintenance—both regular and preventative—is even more important for this equipment than it is for units of lesser capacity.

Equipment, such as a forklift truck or a belt conveyor, that breaks down during the hours of work when most needed results in the loss of valuable capacity. And, further, it increases labor costs because less efficient methods and equipment have to be used to finish the job.

Lubrication, maintenance of proper battery charges, periodic replacement of high-wear parts before failure, all contribute to greater equipment productivity and lower total operating costs. Also, they provide a bonus in the form of extended life of the equipment.

Regular maintenance of hand-powered equipment such as 2- and 4-wheel handtrucks also pays off. Clean, well-lubricated bearings require less physical effort on the part of the workers, thus reducing fatigue and increasing productivity.

*A Clean Layout:* Warehouse layouts can, of course, be described in numerous ways. Warehouses in which good housekeeping provides sanitary storage areas, and in which broken boxes are controlled in one location and not scattered throughout the building, are the warehouses that most frequently have the best layout features.

Obviously, warehouses with lumps of accumulated dirt on the floors, the odor, perhaps, of rotted vegetables and broken packages stored everywhere, are not only poorly managed, but also poorly arranged. Therefore, the clean layout is frequently a signpost of efficiency in warehousing operations.

Summing up—if alert eyes watch for the signpost indicators of unit loads, crew balance, well-maintained equipment, trained employees, competent warehouse management, and the clean layout, the pathway to low-cost handling of fruits and vegetables can easily be found.

*(The author is a staff member, Handling and Facilities Branch, AMS.)*



*A clean layout*



*Unit loading boxes*



*And bags*

# PROCESSED FRUIT AND V

*At Your S*

**T**HE U.S. Department of Agriculture makes available an impartial, official inspection service for processed fruits and vegetables—canned, frozen, dried, and dehydrated. This service also covers other processed foods, such as jams, jellies, peanut butter, and coffee. You can make use of this service to obtain inspection on any of these products in which you have a financial interest. The service is voluntary, offered on a pay-for-service basis, through the Fruit and Vegetable Division of the Agricultural Marketing Service.

USDA's inspectors will inspect your product, and issue a certificate stating its quality. The certification may be based on the official USDA Grade Standards which are available for most of these products, or on specifications written by the buyer or seller.

Inspection can:

- Help you determine whether the terms of your contracts or purchase orders have been met.
- Supplement your quality control programs through continuous in-process checks—from preparing the raw material to warehousing the finished product.
- Help you establish the loan value of the product.
- Help settle claims for damage incurred in transit or storage.

## **Standards provide quality yardstick**

U.S. Grade Standards have been developed by USDA for some 150 different processed fruit and vegetable products. These U.S. Standards provide yardsticks of quality—as well as a common trading language—for voluntary use by the industry.

*Grade A* or *Fancy* means top or best quality.

*Grade B*, *Choice*, or *Extra Standard* means good quality suitable for most purposes.

*Grade C* or *Standard* means lower

quality than *Choice* or *Extra Standard* and a thrifty buy where appearance is not too important.

If a product carries a grade label of this kind, it must meet the quality requirements of the USDA Grade Standards; otherwise, it may be judged to be mislabeled.

Only products that have been packed under Continuous Inspection of the U.S. Department of Agriculture are permitted to use the prefix "U.S." with a grade designation (such as U.S. Grade A), or the familiar USDA shield.

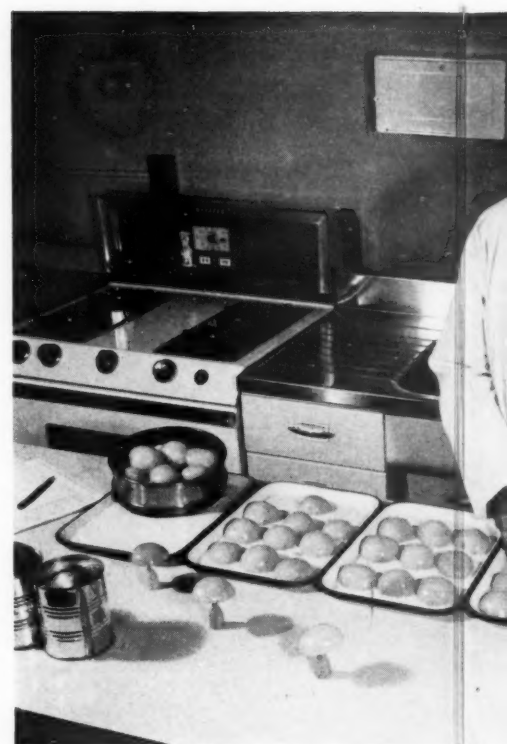
The USDA Grade Standards are designed to:

- Reflect different quality levels for different needs.
- Serve as a convenient basis for sales.
- Furnish guides for in-plant quality control.
- Form a basis for purchase specifications.
- Establish a basis for official inspection.

Copies of the standards are available on request, free of charge.

USDA Grade Standards—for voluntary use—complement other mandatory standards designed for consumer protection. Minimum standards of quality—commonly referred to as *Food and Drug standards*—have been established by the Federal Food and Drug Administration for several of the major canned fruits and vegetables. These products must meet the minimum Food and Drug standards or otherwise be labeled to indicate that they fail to meet such minimum quality levels.

For those products for which Food and Drug minimum standards of quality have been established, the Department of Agriculture adopts, as the minimum level for USDA Grade C, specifications that are at least as high as these mandatory requirements. In establishing USDA Grade Standards it is custo-



mary to have one or more levels of quality above minimum Grade C—for example, Grades A and B. Thus, USDA provides two or more grade levels for marketing purposes and at the same time recognizes the minimum mandatory standards established by the Food and Drug Administration.

## **Four different types of inspection**

You can choose the type of processed fruit and vegetable inspection that is tailored to your needs from the four different types of service available.



# VEGETABLE INSPECTION

ur Service



## Lot inspection

You can request inspection on specific lots of processed fruits or vegetables in which you have a financial interest. The lots can be of any size, and located in processing plants, warehouses, or cold storage plants, in producing areas or terminal markets.

The inspector will check the condition of the containers, draw a prescribed number of containers from the lot, and examine the contents to determine the quality and condition of the product. The results of the inspection are re-

ported to you on an official certificate.

## Continuous inspection

Continuous inspection means that one or more inspectors will be assigned to your processing plant at all times when it is operating to make continuous in-process checks on the preparation, processing, and packing operations.

This service is made available only if your plant meets rigid sanitary requirements for facilities, equipment and product.

Inspectors observe the preparation of your raw materials; observe the plant conditions under which the product is being prepared, processed, and packed; make frequent line checks of the quality of your product as it's processed; and examine samples of the finished products to determine whether they meet U.S. Grade Standards or other specifications you may set up.

The inspector gives you daily reports on the grade of the product being packed, as well as plant sanitation conditions.

On the basis of the inspector's verbal and written reports, you can take immediate action to correct problems before they become serious, and protect the quality of your pack.

After the inspector finishes his examinations and detailed analyses, he issues inspection certificates or other official reports showing the results of the product inspection.

Products packed in any plant operated under the continuous inspection program, and in compliance with USDA inspection regulations, may be labeled with the official USDA marks. You may use either the familiar shield with the statement "Packed under continuous inspection of the U.S. Department of Agriculture" or a grade designation with the prefix "U.S.", like "U.S. Grade A." You also may refer to continuous inspection in your advertising

and sales programs. However, you should submit proofs of the material to the Inspection Service for review before you use it.

## Plant inspection-pack certification

This type of inspection service is similar to continuous inspection except that the inspector may not be present continuously during all operating shifts of the plant. While he is on duty, however, he performs the same functions as he would under continuous inspection. His primary responsibility is to inspect and certify the entire pack as soon after it is produced as possible. Products inspected by this method cannot carry official marks.

Both types of in-plant inspection service may be used to assist plant quality control programs, as well as to facilitate sales programs.

## Unofficial sample inspection

You can select your own samples and submit them to the nearest inspection office for examination. However, inspection certificates issued on this type of examination show only the grade quality or condition of the samples, and make no reference to the quality of the lot from which the samples were taken. Inspection based on unofficial samples is not recommended as a basis for negotiating sales, since there can be no assurance that the samples accurately represent the entire lot.

## Trained inspectors, Well-equipped laboratories

The typical inspector is a college graduate. He went through a formal six-month training program when he entered the inspection service—getting a thorough knowledge of inspection techniques through classroom theory work and practical on-the-job training

under an experienced inspection supervisor. He gets additional training in the techniques of inspecting each new commodity before he is authorized to officially inspect and certify it.

The trained inspector is backed up by well-equipped laboratory facilities. Each inspection office is equipped with the latest scientific equipment usually needed for analyzing the commodities inspected in the area. Strategically located central laboratories are equipped to perform even more detailed quantitative analyses on such products as spices, diet packs, and specialty packs. Some laboratories are also maintained to perform bacteriological analyses to determine the wholesomeness of products and assist in product quality control at processing plants.

#### **USDA—Food and Drug relationship**

USDA's Processed Fruit and Vegetable inspection is a service activity. Its major purpose is to assist processors in preparing better quality products and to provide official certification concerning the grade, quality, or condition of a product which will be useful to all interested parties engaged in the marketing function.

The Food and Drug Administration, on the other hand, is a regulatory agency—charged with enforcement of the Federal Food, Drug, and Cosmetic Act. USDA-inspected products are, of course, subject to compliance with this Act. Representatives of the two agencies strive for a common understanding and evaluation of conditions generally relating to food plant sanitation and product wholesomeness.

Processed Fruit and Vegetable Inspection Service makes every reasonable check during plant inspections and finished product examinations to determine, in addition to the grade, that products are wholesome and free from deleterious or objectionable substances. A certificate of acceptable quality and condition is not knowingly issued on a product which would fail to comply with Food and Drug requirements.

#### **Visual aids and color standards**

USDA has developed a number of visual aids and color guides to help inspectors in uniform interpretation of the various quality factors in the U.S. Grade Standards. While these were designed primarily for use by the Inspection Service, many of them are also available to the public. Processors,

particularly, find these visual aids and color guides valuable tools in maintaining quality control. Among the types of visual aids used by the Inspection Service are wax models for indicating shape, color and types of defects, special plastic and glass color comparators, photographic color slides, black and white photographs and drawings.

USDA has granted licenses to qualified firms to manufacture and sell some of these visual aids to anyone interested. You can get details on the visual aids available and the firms who manufacture them from your nearest inspection office.

#### **Statistical quality control plan**

USDA has developed a Variable

Control Chart Plan, which uses statistical principles to measure the various factors that establish the quality or value of a product. This plan, which is part of the Department's effort to integrate new concepts of product control with its standardization and inspection program, is available for use by processors. You can get details of the plan and find out how it can fit into your quality control program by contacting the Washington, D.C., office of the Inspection Service.

#### **Inspection fees**

Inspection is available to financially interested parties on a pay-for-service basis. The fees are assessed at specific rates, designed to cover the cost of the service.



*This trained AMS marketing specialist is backed up by well-equipped laboratory facilities usually needed for analyzing the quality and condition of commodities inspected.*

# Reducing Grocery Breakage And Damage

By JAMES J. KARITAS



*Faulty stacking of open cases on the conveyor caused this damage, which is absorbed as a food distribution cost and passed on to consumers in the form of higher prices.*

EVER heard the crash of a falling display and observed the resultant damage in the corner supermarket? Actually, this type of damage happens infrequently. But, when it does, it's quite spectacular. Not so apparent is the damage to individual items that occurs regularly in food stores and grocery warehouses. Small, seemingly trivial instances of damage, rather than the spectacular, comprise the largest share of total damage losses, both in grocery warehouses and retail stores.

Damage to grocery products occurs at all stages of handling. It is absorbed as a food distribution cost and passed on to consumers in the form of higher prices.

Based on AMS studies of breakage and damage in three large grocery warehouses and five modern supermarkets, it is estimated that damage losses to dry grocery products in warehousing, store delivery and retailing amount to between 30 and 50 million dollars annually.

To help reduce this waste, a reporting procedure was installed in several grocery warehouses and retail super-

markets under which all instances of damage and their causes were recorded for a period of several months. In the stores and warehouses studied, causes were established for over 3,000 instances of damage. At the warehouse, 21 causes were responsible for 70 percent of the known damage. At the store, 10 reasons caused 62 percent of the damage.

By concentrating their attention on the most important causes, researchers were able to develop improved procedures and equipment to reduce damage losses.

Some of the causes affected certain commodities more than others. For instance, nails protruding from pallets were responsible for 85 percent of the damage to bagged merchandise in two of the warehouses studied.

The solution for bagged merchandise damage was using better pallets for these items and also storing them in racks instead of double stacking the pallet loads.

At the store the damage was almost equally divided between that caused by employees and that caused by cus-

tomers. The most important cause, amounting to 19 percent of total retail damage, was cutting cases improperly. To reduce this damage, improved case cutting procedures were developed and the basic requirements for a satisfactory case cutter determined.

Items dropped by customers amounted to 10 percent of the damage. This was partially remedied by installing resilient flooring materials such as rubber matting in front of glass merchandise sections and in the checkout area. Some large stores with high volume and a high breakage rate may easily justify this damage-reducing expenditure, while smaller stores may not.

The damage remedies developed through this type of research should materially aid warehouse and store operators to reduce the extent of the damage presently occurring. Reduction of damage losses will contribute towards improved food distribution efficiency, lower marketing costs and lower costs to the consumer.

*(The author is a staff member of the Transportation and Facilities Research Division, AMS.)*

**DAMAGE**  
(Continued from page 11)

*A forklift pierced these boxes, and nonfat dry milk spills out onto the floor.*



*Because of a pallet shortage, the pallet housing this merchandise was removed.*



# Precooling Celery

**W**HOLESALEERS, retailers, and consumers should show no preference for celery on the basis of its handling in a hydrocooler or a vacuum cooler. The two cooling processes do an equally good job of protecting high quality in celery when they remove the field heat from freshly harvested celery, according to recent tests by researchers in the USDA's Agricultural Marketing Service.

Although hydrocooling resulted in

somewhat lower temperature in some instances, the most important commercial factor—the salability rating—was the same for celery cooled with either process. Heretofore, little information has been available to show what difference, if any, these two cooling methods make in the quality of celery.

Both prepackaged and crate-packed Pascal celery were used in the AMS tests. The crated stalks were mature and lightly trimmed. The prepackaged

celery consisted of hearts placed in perforated plastic bags, with 2 to 5 hearts in each bag.

In the vacuum cooling tests, both the crated and prepackaged celery were cooled in their original containers. The crated celery was also cooled in its original container during the hydrocooling tests, but the celery hearts to be prepackaged were hydrocooled before packaging. Standard commercial practices were followed in all the cooling tests.

After cooling it, marketing researchers held the celery at temperatures recommended for commercial shipment to market. During this 8-day simulated transit period, half the crated celery was covered with crushed ice, following the practice used in some rail shipments.

At the end of the simulated trip, part of the celery was examined immediately to determine its condition at the wholesale level. The rest of the celery was held for a 2-day period to represent retail marketing of the product. The celery was held in the original containers during this time, at the temperature recommended for retail handling.

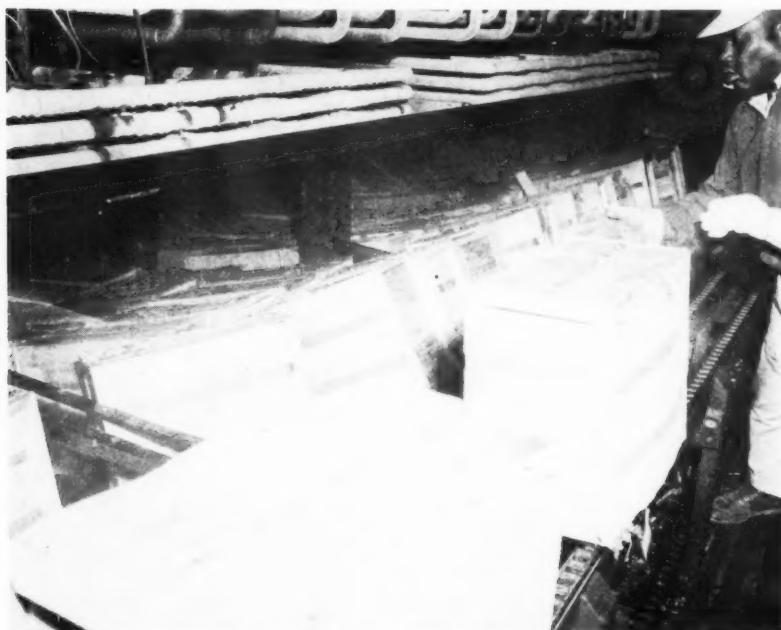
At both simulated wholesale and retail levels, the celery was examined for its color, crispness, freedom from discoloration at bruises, and freedom from discoloration of the butts.

Good-to-excellent salability ratings were given to all lots of the celery examined at the end of the simulated 8-day trip. A somewhat higher rating was given to celery that had been top-iced. There was slightly more decay in the top-iced celery, but this was not commercially important.

Discoloration of the butts was the most noticeable change in the celery during the "transit" period, but this was discounted also, since the butts are trimmed at the retail level. A final salability rating of "Good" was given to all lots of the celery at the end of the 2-day retail interval.

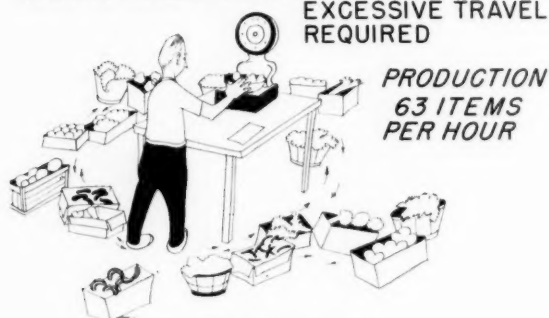
In earlier AMS tests, vacuum cooling and hydrocooling have also been found to give an equally good performance with cauliflower and garden peas. In some cases, one of the processes has proved better than the other for certain vegetables. Hydrocooling, for instance, gives better protection to asparagus and sweet corn because a lower temperature can be maintained.

A series of additional tests is planned to compare the effects of vacuum cooling on the quality of different vegetables.



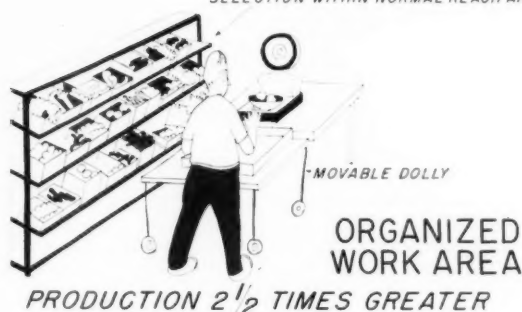
*Crates of celery are being removed from a conveyor and placed in a hydrocooler where they are quickly cooled by overhead watersprays. The temperature of the water is usually around 32 degrees.*

## WORK AREA UNORGANIZED EXCESSIVE TRAVEL REQUIRED



*The wrong way*

SELECTION WITHIN NORMAL REACH AREA



*The right way*

# Warehouse Repack Costs Reduced

By ARNOLD L. LUNDQUIST

WHOLESALEERS have been shown how to increase their produce repack production by approximately two and one-half times and how to reduce their direct labor costs some 58 percent.

These repacks—variously referred to in trade lingo as “breakups” or “small goods” or “speciality items”—are made to meet the needs of the many retailers who, because of price or low business volume, order produce in quantities that are less than the standard-sized packs.

To service such retailers, wholesalers open the full containers and repack their contents in the smaller quantities ordered. This operation is both time-consuming and costly because the average warehouse repacks some 40 items. Among these are artichokes, asparagus, green beans, broccoli, coconuts, parsnips, savoy and celery cabbage, cucumbers and squash. Normally a produce warehouse with \$3.5 million in annual sales will do enough repack business to keep one man employed throughout a full eight-hour shift.

Tackling the problem, marketing researchers of USDA's Agricultural Marketing Service analyzed the produce repack operation in eight corporate, voluntary, and cooperative type food distribution centers. The result was the development of methods and layouts which increased production and cut labor costs immensely.

How did the marketing researchers

accomplish this? They decided that repack units could be set up either by weight or count, and that a basic quantity should be established. Then the basic quantity became the unit, and the retailer ordered one or more units depending on his requirements.

For example, a unit of green peppers was 5 pounds. (A bushel is the normal pack for green peppers received at the warehouse.) Standardization simplified the job of preparing repack orders, and contributed to a reduction in handling time.

AMS marketing researchers suggest that the repack operation should be located as closely as possible to needed merchandise, and since studies show that 90 percent of the items repacked are stored in the wet box, the station should be placed there. Repack should be along the order selector's route. Temperature should be near 32° F. and relative humidity within the range of 85 to 95 percent. This approximates wet box holding conditions and is most nearly perfect for the many items of merchandise handled in repack.

In a recommended layout for the repack work area, the work table and scale platform are positioned 32 inches above the floor, which allows comfortable room for reaching over the side of the container while packing merchandise. Shelving to hold merchandise and finished orders is inclined toward

the operator at a 30 degree angle so that items are easily obtained. Also, racks may be provided overhead for storage of extra supplies. As for warehouse space, about 100 square feet is required for the layout.

Responsibility for the repack room should be assigned to only one man, which will permit him to become proficient in his job, and management will be able to pinpoint delegation of authority. Should the volume of work require it, an additional man could be placed on the operation.

Marketing researchers suggest that prior to the repack operation, containers be opened and stocks replenished. Orders for repack should be recorded on a separate invoice so that this work can be done ahead of other order assembly work. This permits the operator to have the repack order assembled and ready for pick-up by the regular order selector.

It is important also that a definite policy be established and maintained about coding each repacked case with unmistakable identifying information as to the number of repack boxes, the store number of the order, and the stop number of the load. And, of course, invoices must be marked accordingly.

The author is a staff member, Transportation and Facilities Research Division, AMS.

# A New Marketing Tool

## *For the Northeast Meat Pullet Trade*

By EDWARD H. HANSEN

A new marketing tool—compliments of the Federal-State Market News Service—is being provided members of the Northeast meat pullet trade to help them make marketing decisions with a greater degree of confidence.

This tool is a series of reports covering prices and marketing conditions on pullets produced for meat purposes in a five-State area.

The reports were issued for the first time early in 1962 by the Dairy and Poultry Market News Service of AMS, in cooperation with the New Jersey and New York State Departments of Agriculture.

Considering the country as a whole, the growing of pullets for meat is a somewhat minor phase of the poultry industry. Interestingly enough, however, it is a major source of income for a group of specialized poultrymen in New Jersey, New York, Pennsylvania, Delaware, and Connecticut. In 1961, for instance, an estimated 4,700,000 chickens were produced for meat in New Jersey and 83% of these were classified by growers as "heavy pullets."

The pullets range in size from five to seven pounds, and take from 14 to 17 weeks to reach that weight. Most

*(continued on page 16)*



*Pullets like these, used for meat purposes, are the subject of a series of market-news reports covering prices and marketing conditions in a five-State area. The market news reporter on the right is receiving on-the-spot reports from buyers and sellers of meat pullets.*

DR. H. C. KINSMAN, JR.  
AMER VETERINARY MEDICAL ASSN  
600 S MICHIGAN AVE  
CHICAGO 5 ILL  
35 7-21-61

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## A New Marketing Tool

(continued from page 15)

are white, although a gray crossbreed is also grown. Demand for the pullets is heaviest during the Jewish holidays.

For several years, the bulk of pullets was moved to the New York City live poultry terminal, where they were sold on a commission basis. The more recent trend has been to bypass the terminal and deliver the pullets directly to processors in New York City or outlying areas.

Prices paid for pullets generally have been based on prices received and reported at the terminal. Since fewer pullets are now sold at that point, these prices have become less representative. Without price, supply, and demand information from competing areas, producers have had to rely al-

most entirely on the buyers for current information. This situation often was a hindrance to producers who were in need of a complete picture of the market.

Requests were made to the Market News Service to provide information on a wider area. The result: Trading information is no longer limited to the New York Terminal. Federal and Federal-State market news reporters—located in New York, New Jersey and Delaware—obtain information from producers, country buyers, commission merchants, and processors of heavy pullets. Information is compiled, and the resulting reports are channeled to a central point, where a weekly Federal-State area pullet report is released.

The reports are disseminated primarily through trade newspapers and government reports, which are mailed to any one wishing to receive them. They are also available for use by radio and television broadcasters.

This factual and timely information is another way in which the Market News Service, with the aid of cooperating states, is adjusting its program to better serve a changing agricultural market.

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*The author is Eastern Area Supervisor of the Dairy and Poultry Market News Branch, Dairy Division, Agricultural Marketing Service, U.S. Department of Agriculture.*

## Milk Marketing Orders Are Now in AMS

THE U.S. Department of Agriculture has transferred the marketing agreement and order functions previously performed by its Agricultural Stabilization and Conservation Service—including milk and tobacco marketing orders—to the Agricultural Marketing Service.

This assignment was made by Secretary of Agriculture Orville L. Freeman, as part of a reorganization of USDA's Agricultural Stabilization and Conservation Service.

All of the marketing agreement and order work for fruits and vegetables has been handled by AMS—in its Fruit and Vegetable Division. Orders are

now in effect for 45 different fruit, vegetable, and tree nut crops grown in 27 States.

The reorganization transfers to AMS all marketing orders for milk. A total of 83 Federal milk marketing orders are currently in effect and will be administered by a milk marketing orders Division of AMS.

A reactivated marketing agreement on shade-grown cigar-leaf tobacco produced in Florida and Georgia is also included in the transfer of work, returning to the Tobacco Division in AMS. A marketing order on ryegrass seed is currently being considered. A hearing was held on this in Houston, Texas, and

subsequent work on it will be done in the Grain Division of AMS.

Secretary Freeman announced the proposed transfer of functions on Nov. 15, and interested persons were invited and given opportunity to file their views on the transfer of functions within the next 30 days.

Marketing agreement and order programs are authorized and carried out under the 25-year-old Agricultural Marketing Agreement Act. They are self help programs, designed to improve returns to growers through orderly marketing. Through them, producers can work together to solve marketing problems that they cannot solve individually.



